F-115

7 March 1977

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MEMORANDUM FOR: Sayre Stevens
Deputy Director for Intelligence

STAT FROM : [redacted]
Acting Director, Center for Policy Support

SUBJECT : Improving Intelligence Analysis

1. This relates to our discussion on February 16 about alternative approaches in intelligence analysis. Four of these--alternative hypothesis analysis, competitive analysis, devil's advocacy, and alternate conclusions to a best judgment--are discussed in the attached memorandum
STAT drafted by [redacted]

2. Also attached is a companion piece by [redacted] STAT
STAT [redacted] that examines one means of institutionalizing such approaches and augmenting the analytical process. The memorandum discusses four frameworks in which new panels of outside specialists could be constructed for the DDI.

3. These memoranda are preliminary cuts at the issue of institutionalizing alternative hypothesis analysis in the Directorate. Your reactions to the paper on panels will assist us in developing the paper requested by the DDCI (see attachment).

Attachments:
As stated

cc: Paul Walsh
Evan Hineman
Karl Weber
STAT [redacted]

STAT [redacted]

D R A F T

March 1977

MEMORANDUM:

SUBJECT : Improving the Quality of Intelligence Analysis

Introduction

1. Intelligence analysts usually work with incomplete data and the deceptive areas of human perceptions and intentions. Because of the uncertainties, different conclusions can sometimes be drawn from the same data. The problem for the intelligence analyst is to ensure that the data are rigorously examined, the uncertainties are clearly stated and the implications of alternative conclusions are clearly drawn. The utility of intelligence analysis for the policy oriented intelligence consumer is in direct proportion to how the analysis meets these criteria.

2. Four analytical techniques that appear to have merit for intelligence analysis include (1) alternative hypothesis analysis (2) competitive analysis (3) a devil's

advocate or challenging mechanism and (4) alternative conclusions to a best judgment.

Alternative Hypothesis Analysis

3. Alternative hypothesis is a technique that ensures the examination of more than one hypothesis. Problems that lend themselves to this kind of treatment include those in which alternative hypotheses already exist in the community but have not been rigorously analyzed; those about which enough significant disagreement exists to develop possible alternative hypotheses; and those fraught with so many uncertainties that alternative hypotheses should be developed. Time constraints, the realities of human nature, and past experience indicate that this approach would be most effective if individual alternative hypotheses were developed by separate groups of people.

4. A substantively strong project monitor, preferably one skilled in understanding and working out the human problems likely to be generated by such an exercise, would be required. He would staff the groups, serve as an interface between them, establish procedures, ensure that teams have equal access to all pertinent data, and generally monitor their progress.

Competitive Analysis

5. In contrast to the alternative hypothesis method, the competitive analysis technique does not presume that alternative hypotheses already exist or can be developed. Instead, two or more groups examine the same problem independently, and they may or may not use different hypotheses or reach different conclusions. Competitive analysis already takes place to some extent among the various government agencies. Policy questions that generate wide ranges of uncertainties or disagreements also lend themselves to this kind of treatment.

6. Both competitive groups could be staffed by Agency people, or one of the groups could be staffed by outside contractors. The latter seems preferable. Experience indicates, moreover, that efforts should be made to choose people with a mix of views. If either team were dominated by one set of preconceived biases, significant hypotheses might not be objectively and rigorously analyzed. Project monitors would also be required for competitive analysis exercises. Their functions and required skills would be the same as those discussed above.

Devil's Advocate/Challenging Mechanism

7. Establishing a devil's advocate or challenging function would be a third possible way of improving intelligence analysis. Instead of facilitating a positive exercise of pursuing various analytical paths, a devil's advocate function would serve more as a critique mechanism. It could be reserved for those analytical products that could profit from an occasional intense probing to determine whether or not analytical methodologies used were sound, whether sufficient alternative hypotheses were surfaced, and whether any of the latter had been discarded too early in the analytical process. Taking an analytical product through such a rigorous test, either during this formative stage or after its completion, should give analysts and consumers more confidence in the product.

8. This function could be performed by appropriate Agency personnel or outside specialists. Selecting the latter would have the advantages of keeping the communication lines with outside research specialists open and guarding agianst an Agency mind-set predominating. Specialists could be called in either on a regular basis or as needed.

Alternative Conclusions to a Best Judgment

9. Presenting alternative conclusions to a best judgment is another method of focusing adequate attention on alternative hypotheses, and it is fairly self-explanatory. When analyzing data that could easily lend itself to various interpretations, an analyst could systematically set forth the possible alternate conclusions with their individual policy implications. One person could undertake this type of approach alone, or several analysts could work together, each being tasked to develop one or more of the possible conclusions.

Utility to Managers

10. The results of any of the above approaches would be of some use to all levels of Agency managers. They would reap the benefits of an additional quality control system on their products, knowing that the key judgments and assumptions of their analysis have been rigorously tested. There would also be the advantage of being able to inform policy oriented consumers of unresolved uncertainties and the implications of any significant alternative hypotheses. Managers would profit by having been alerted in advance to possible

arguments against best judgments and by being better prepared to defend them. Additional data or new methodologies might also be surfaced as a result of any of these approaches.

11. The advantages discussed above would have to be weighed against several disadvantages. Overseeing any of these techniques would require considerable additional time and energy from Agency managers. A professional atmosphere would have to be maintained in which the focus would not be on the data or the conclusions, but on the analytical process. All participants would have to appreciate that our analytical work seldom produces a single, unassailable conclusion.

12. These approaches also would require additional personnel and financial resources. Because such efforts would be expensive, they should be focused selectively on only those analytical problems that have serious policy implications.

STAT [redacted]

DRAFT

MEMORANDUM

SUBJECT: FRAMEWORKS FOR NEW DDI PANELS OF OUTSIDE EXPERTS

Panels of outside experts advise, consult with, produce, and critique work for our analytical components. They are numerous and multifarious:

Oversight and review:	:	PFIAB
	:	Intelligence Oversight Board
Advisory	:	Scientific and Technical Advisory Panel
	:	Military-Economic Advisory Panel
	:	Nuclear Intelligence Panel
	:	the proposed Intelligence Advisory Panel (to consult on estimates with the NIOs)
Consultative	:	[redacted] STAT
	:	[redacted] STAT
Special and Ad Hoc	:	"Monster" Panel
	:	Laser Weapons Panel
	:	Particle Beam Weapons Panel

These and other panels and consulting groups employed in earlier years have a great deal in common. Membership characteristically is small (averaging about 10 or 12), highly competent (leading senior specialists), and diverse. In the cases of all the panels working with DDI offices, a single intelligence issue or a related set of problems determined the membership. The

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The "Monster" Panel (inactive now) joined scientific and technical people with a variety of skills. [redacted] STAT

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STAT [redacted] In contrast, the proposed Intelligence Advisory Panel would have a much larger membership (about three dozen) with no common focus. Groups of three or four would be brought in to advise on individual estimates and plenum sessions would be rare.

All of the DDI panels are evaluated highly by people in the directorate who work directly with them. They are said to make valuable, substantive contributions and to provide an important means for analysts to keep up with new methods and data in their own and other relevant fields. The panels have apparently remained vital, flexible, and non-partisan. Unlike the old ONE group of consultants--many of whom had long been out of touch with new developments in their fields and with the new generation of scholars--panelists used by DDI offices are active leaders in their fields. In some cases, the usefulness of DDI panels transcends the needs of sponsoring offices. [redacted] STAT

STAT [redacted] routinely includes representatives of several DDI offices at its meetings, and the Military-Economic Advisory Panel impacts on offices other than OSR and OER.

The costs of maintaining the various DDI panels apparently are relatively small, [redacted] per diem

consulting fee and travel expenses, and sponsoring offices incur additional costs in direct support of panels. The latter vary from one panel to another largely according to the amount of paper that panelists receive and the number of meetings held. In most cases, remuneration is not the main factor that motivates panelists to assist the agency. Some in fact provide their service gratis, and many command higher consulting fees in the private sector. DDI consultants work for the Agency primarily for other reasons: the prestige of doing so and of being included in a small, elite group of leaders in their fields; unabashed patriotism; the challenge or perhaps the excitement of the task (the latter certainly was a main motive for members of the "Monster" Panel). Other less altruistic motives undoubtedly are important too: the desire to keep up with new data and analyses available in the intelligence community; and perhaps even the desire to keep a covetous eye on new technological developments abroad in order to co-opt them.

FRAMEWORKS FOR NEW DDI PANELS

Despite the numerous and successful precedents in the scientific, technical, military, and military-economic fields, other DDI components have done little to take advantage of outside expertise on an organized basis. Most of the latter--particularly in regional and political analysis--most likely could benefit from consultative relationships. New panels or

consulting groups could be set up in four general frameworks:

A. Directorate Panels

B. Regional Panels

C. Issues and Problems Panels

D. Consulting Matrix

A. Directorate Panels

A Senior Foreign Intelligence Review Panel of highly qualified persons with experience at the top ranks of public and private foreign affairs bureaucracies could perform a number of valuable services:

--assist the DDI and the DCI in evaluating the scope, timeliness, policy-relevance, conceptual and structural merits of DDI research programs

--review selected finished intelligence products for the same purposes

--advise on new methods, data, and alternative hypotheses

--assist in the production of predictive intelligence by suggesting different analytical frameworks and by warning of otherwise unanticipated trends and developments

--help keep our middle and senior managers (many of whom have not kept up their outside ties) better in touch with new scholars and developments in private research.

Membership of approximately a dozen most likely would be ideal. Two or more top officials of leading think tanks like the Carnegie Endowment or the Georgetown Center (which do not perform government contract research) should be included. Others from the private sector--banking, business, finance, industry, etc.--should also be included.

Costs for such a panel would be minimal. A critical difference between such a panel and the others described below is that it would impact primarily on ranking DDI officials rather than the working level.

An alternative approach is to establish a larger DDI panel to consult and advise on individual and related projects. If the major disciplines and interests of all the production offices were represented (including strictly regional specialists), a "super" DDI panel would probably need between 30 and 50 members. A panel of such proportions would be costly, unwieldy, and difficult to manage and convene. Like the proposed Intelligence Advisory Panel for the NIOs, members could be convened in small groups to advise on particular projects. Unlike a senior review panel, a large consulting panel would impact primarily with working level people. Such a panel would be particularly advantageous if the NIO panel is not approved, but redundant in the main if it is. It is appropriate, to note here that members of the Academic Coordinator's directorate committee* are opposed to "super" DDI panels in any form.

B. Regional Panels

Interdisciplinary regional panels could be established in six or more regional areas to assist working level people

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throughout the directorate. Regional panels comprised of economists, political scientists, historians, sociologists, and others would:

--Provide an interdisciplinary forum to advise and critique current and planned research.

--Advise on methodological innovations and new data bases in the private sector.

--Inform our people of the latest research in the private sector.

--Recommend new lines of analysis and alternative hypotheses.

--Alert analysts to emerging trends and likely future developments of importance in regional affairs.

In most cases, regional panels need not have more than six to ten members who whould be convened three or four times annually and who would be expected to stay in regular contact with our regional affairs officers throughout the year. Because of the interdisciplinary composition of the panels, they would best be administered through the Center for Policy Support. Since regional panels would be established primarily to assist working level analysts, maximum contact between a large number of analysts and panelists would be expected.

C. Issues and Problems Panels

As explained above, a number of panels already exist in the scientific, technical, military, and military-economic fields devoted to specific problems or sets of problems.

Additional panels in those fields may be desirable now and in the future. Such policy issues as non-proliferation, terrorism, human rights, technology transfer, narcotics, etc., might be more fully investigated with the assistance of panels of outside experts. Some ad hoc panels could be set up temporarily and could remain quite small; others would need to be larger and more enduring.

D. Consulting Matrix

The approaches discussed above are complementary and can be employed simultaneously as long as central coordination and control is exercised. In such a setting, working groups of consultants could be convened from different panels to work together and with analysts on interdisciplinary problems. The advantages of a consulting matrix, either in addition to or instead of individual panels, are:

--Would permit maximum flexibility for bringing diverse viewpoints and backgrounds to bear on a problem.

--Would permit the DDI to maintain a large and protean stable of consultants in the many disciplines.

--Might well cost less than an equivalent number of consultants tied to panels that meet periodically.

Such an approach would also have significant disadvantages unless it were tied in closely with other, specialized panels:

--consulting relationships require sustained and regular contact if they are to be effective; in a matrix approach not all consultants will be regularly involved.

--central management would be necessary to coordinate a consulting matrix, but at the expense of needed involvement by line managers and analysts.

CONCLUSIONS

More detailed information about the costs of maintaining existing panels--and projections of likely costs of creating new ones--are needed. In some instances, major costs are not accounted for because records are not kept of the time spent by line personnel in the direct support of panels. Estimates of these--and perhaps other--hidden costs should be made by offices now sponsoring panels and evaluated by the DDI Management Staff as a corrollary to this study. It should be emphasized in addition, that the largest single expenditure for panels frequently is the initial cost of contacting, clearing, processing, and setting up the group. Opposition to additional panels of outside experts will no doubt arise in at least a few offices which seem to prefer informal and uncoordinated methods to keep in touch with outside experts or disdain such contacts altogether. Reluctant managers probably will have to be shown that panels can be both inexpensive and highly beneficial to their research efforts. Better communications within the directorate about the experience of existing panels most likely would help.